



Technical Information

Code: **TI-20-17**

Date: **14.12.2020**

Guidance for application of IMSBC Code (5th amendment) Certificate of Compliance & Requirement

This guidance provides useful information for applying fitness certificates for carrying solid bulk cargoes basis on latest amendment to IMSBC Code (5th amendment).

Under the IMSBC Code, solid bulk cargoes are classified as follow:

- ✓ Cargoes likely to liquefy (Group A)
- ✓ Cargoes having chemical hazard (Group B)
- ✓ Cargoes other than formers (Group C).

All are named as “Group A cargoes”, “Group B cargoes” and “Group C cargoes” respectively.

Requirements for Construction and Equipment

1. For all type of cargoes, a loading manual and stability information booklet approved by ICS should be provided onboard.
2. For all type of cargoes, special requirement and equipment for fire protection and personal protection and information on properties of each material should be provided onboard.
3. In case where the moisture content of Group A cargoes exceeds the transportable moisture limit, the cargo is to be carried by the specially constructed or fitted cargo ship designed portable divisions or permanent structural boundaries to confine any shift of cargo (for details, please refer to IMSBC Code Section 7).
4. The requirements for the carriage of Group B cargoes except COAL and BROWN COAL BRIQUETTES is brought in appendix 1 and the requirements for the carriage of COAL and BROWN COAL BRIQUETTES in appendix 2.

Notes:

- The applications of the requirements of SOLAS74 Reg.II-2/53 and 54 for carriage of dangerous goods (Reg.II-2/10.7 and 19 under SOLAS2000) are also shown in appendix 1.

Application and Submission of Documents

1. The ship owner/ manager, or the shipbuilder, should submit an application containing the list of cargoes to be included in the IMSBC Code certificate of Compliance as, Groups A, C and/or B cargoes to ICS head office.
2. In case where the certification is requested for the carriage of Group B cargoes, the applicant should submit the documents as shown in appendix 4 (other than COAL and BROWN COAL BRIQUETTES) and/or appendix 5 (COAL and BROWN COAL BRIQUETTES) to ICS head office.
3. In case where the certification is requested for the carriage of Group A cargoes without appropriate restrictions on their moisture contents, the relevant structural drawings, stability calculations should be submitted to ICS head office.

Note:

- In case where dangerous goods having the UN No. are included in the cargoes, the applicant should also apply for the issue of a certificate of compliance with the requirements of SOLAS74 Reg.II-2/54 (Reg.II-2/19 under SOLAS 2000) as necessary.

Document Review, Onboard Survey and Certificate Issuance

Certificate of compliance with IMSBC Code will be issued after documents review at ICS head office and confirmation of survey onboard by attending surveyor.

Renewal and Rewriting of the Certificate

1. Reissuing of Certificate of compliance with IMSBC Code due to Cargoes newly added and requirements on construction/equipment by 5th amendment:

- ✓ In case where there are no additional requirements (the vessel has complied with the requirements for loading), application and list of cargoes should be submitted to ICS head office.
- ✓ In case that there are additional requirements (the survey on board is required), application and list of cargoes should be submitted to ICS head office.

2. Renewal of certificate of compliance with IMSBC:

The application including list of cargoes should be submitted to ICS head office and onboard survey is necessary.

3. Issuance of certificate of compliance with IMSBC due to change of flag or ship's name:

The application including list of cargoes should be submitted to ICS head office and onboard survey is necessary (in any cases).

For any questions about this Technical Information, please contact:

Iranian Classification Society (ICS)

Convention & Legislation Department

Phone: +98-21-42186210

Fax: +98-21-88837744

E-Mail: cld@ics.org.ir

Person in charge: Amir Soeizy

Disclaimer:

Although all possible efforts have been made to ensure correctness and completeness of the contents contained in this information service, the Iranian Classification Society is not responsible for any errors or omissions made herein, nor held liable for any actions taken by any party as a result of information retrieved from this information service.



Appendix 1: Requirements of construction and equipment for individual cargoes under the provisions of the IMSBC Code (5th amendment) and SOLAS Reg.II-2/54.2 (Reg.II-2/19.3 on or after 2000 amendments)

Code: TI-20-17

Date: 14.12.2020

Iranian Classification Society

Appendix 1: Requirements of construction and equipment for individual cargoes under the provisions of the IMSBC Code (5th amendment) and SOLAS Reg.II-2/54.2 (Reg.II-2/19.3 on or after 2000 amendments)

a	b	c	d	e	f	g	h	i	j	k	l	m	n	SOLAS Reg.II-2/54.2 or 19.3										w
														Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	FFEA (SOLAS Reg.II-2/10.7.1.3)		
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected	Dual purpose nozzles	4 jets of water	Heating arrangement	Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	FFEA (SOLAS Reg.II-2/10.7.1.3)		
ALFALFA			C																					
ALUMINA			C																					
ALUMINA, CALCINED			C																					
ALUMINA HYDRATE	MHB		A and B				Y	Y																
ALUMINA SILICA			C																					
ALUMINA SILICA, pellets			C																					
ALUMINIUM FERROSILICON POWDER	4.3	1395	B	A, G	Y	ML,Sa	Y			IICT2						X	X	X	X	X	X			
ALUMINIUM FLUORIDE			A																					
ALUMINIUM NITRATE	5.1	1438	B				Y	Y			Y	Y		X	X				X	X			(Yes)	
ALUMINIUM SILICON POWDER, UNCOATED	4.3	1398	B	A, G	Y	ML,Sa	Y			IICT2						X	X	X	X	X	X			
ALUMINIUM SMELTING BY-PRODUCTS or ALUMINIUM REMELTING BY-PRODUCTS	4.3	3170	B	A, G	Y	ML,Sa	Y			IICT2						X	X	X	X	X	X			
ALUMINIUM SMELTING / REMELTING BY-PRODUCTS, PROCESSED	MHB		A and B	G	Y	ML			F														Yes	
AMMONIUM NITRATE	5.1	1942	B	A	Y		Y	Y		IS		Y	N1	X	X	X		X ⁸	X	X	X		(Yes)	
AMMONIUM NITRATE BASED FERTILIZER	5.1	2067	B	A	Y		Y	Y		IS		Y	N1 or N2	X	X	X		X ⁸	X	X	X		(Yes)	

a	b	c	d	e	f	g	h	i	j	k	l	m	n	SOLAS Reg.II-2/54.2 or 19.3							w	
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical	Dual purpose nozzles	4 jets of water	Heating arrangement	Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	FFEA (SOLAS Reg.II-2/10.7.1.3)
AMMONIUM NITRATE BASED FERTILIZER	9	2071	B	A	Y		Y	Y		IS		Y	N1 or N2	X	X	X		X ⁸	X	X	X	(Yes)
AMMONIUM NITRATE BASED FERTILIZER (non-hazardous)			C	A	Y		Y	Y		IS		Y	N1 or N2									
AMMONIUM SULPHATE			C																			
AMORPHOUS SODIUM SILICATE LUMPS	MHB		B																			
ANTIMONY ORE AND RESIDUE			C																			
BARIUM NITRATE	5.1	1446	B			Nm	Y	Y			Y	Y		X	X				X	X		(Yes)
BARYTES			C																			
BAUXITE			C																			
BAUXITE FINES			A																			
BIOSLUDGE			C																			
BORAX (PENTAHYDRATE CRUDE)			C																			
BORAX, ANHYDROUS (crude or refined)			C																			
BORIC ACID	MHB		B																			
BROWN COAL BRIQUETTES	MHB		B	See Table 1.3																		
BRUCITE			C																			
CALCIUM FLUORIDE CALCIUM SULPHATE, CALCIUM CARBONATE MIXTURE			A																			
CALCIUM NITRATE	5.1	1454	B				Y	Y			Y	Y		X	X				X	X		(Yes)
CALCIUM NITRATE FERTILIZER			C																			
CARBORUNDUM			C																			
CASTOR BEANS ¹	9	2969	B			Nm	Y	Y			Y			X	X				X	X		Yes
CEMENT			C																			

a	b	c	d	e	f	g	h	i	j	k	l	m	n	SOLAS Reg.II-2/54.2 or 19.3							w		
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical	Dual purpose nozzles	4 jets of water	Heating arrangement	Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	FFEA (SOLAS Reg.II-2/10.7.1.3)	
CEMENT CLINKERS			C																				
CHAMOTTE			C																				
CHARCOAL	MHB		B																				Yes
CHEMICAL GYPSUM			A																				
CHLORITE			C																				
CHOPPED RUBBER AND PLASTIC INSULATION			C																				Yes ²
CHROME PELLETS			C																				
CHROMITE ORE			C																				
CLAY			C																				
CLINKER ASH	MHB		A and B					Y															
COAL	MHB		A and B	See Table 1.3																			
COAL SLURRY			A			N																	
COAL TAR PITCH	MHB		B					Y															
COARSE CHOPPED TYRES			C																				Yes ²
COARSE IRON AND STEEL SLAG AND ITS MIXTURE			C																				
COKE			C																				
COKE BREEZE			A																				
COLEMANITE			C																				
COPPER GRANULES			C																				
COPPER MATTE			C																				
COPPER SLAG			A																				
COPRA (dry)	4.2	1363	B	A	Y	Nm								X	X				X	X	X		Yes

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical	Dual purpose nozzles	4 jets of water	Heating arrangement	SOLAS Reg.II-2/54.2 or 19.3								FFEA (SOLAS Reg.II-2/10.7.1.3)	
														Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation		
CRUSHED CARBON ANODES			C																				
CRYOLITE			C																				
DIAMMONIUM PHOSPHATE (D.A.P.)			C																				
DIRECT REDUCED IRON, (A) Briquettes, hot-moulded	MHB		B	F	Y	Nm, Sp				IICT2													
DIRECT REDUCED IRON, (B) Lumps, pellets, cold-moulded briquettes ³	MHB		B	F	Y					IICT2													Yes
DIRECT REDUCED IRON, (C) (By-product fines) ³	MHB		B	F	Y		Y			IICT2													Yes
DISTILLERS DRIED GRAINS WITH SOLUBLES			C																				
DOLOMITE			C																				
FELSPAR LUMP			C																				
FERROCHROME			C																				
FERROCHROME, exothermic			C																				
FERROMANGANESE			C																				
FERRONICKEL			C																				
FERRONICKEL SLAG (granulated)			C																				
FERROPHOSPHORUS (including briquettes)	MHB		B			ML, Sa	Y			IICT1													
FERROSILICON with 30% or more but less than 90% silicon (including briquettes)	4.3	1408	B	A, G	Y	ML,Sa	Y	Y	F,N	IICT1					X	X	X	X	X	X	X		
FERROSILICON with at least 25% but less than 30% silicon, or 90% or more silicon	MHB		B	G	Y	ML,Sa	Y		F,N	IICT1													
FERROUS METAL BORINGS, SHAVINGS, TURNINGS or CUTTINGS	4.2	2793	B	A	Y		Y							X	X				X	X	X	Yes	
FERROUS SULPHATE HEPTAHYDRATE			C																				
FERTILIZERS WITHOUT NITRATES (non-hazardous)			C																				

a	b	c	d	e	f	g	h	i	j	k	l	m	n	SOLAS Reg.II-2/54.2 or 19.3							w		
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical	Dual purpose nozzles	4 jets of water	Heating arrangement	Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	FFEA (SOLAS Reg.II-2/10.7.1.3)	
FISH (IN BULK)			A																				
FISHMEAL (FISHSCRAP), STABILIZED	9	2216	B			Nm	Y							X	X				X	X			Yes
FLUE DUST, CONTAINING LEAD AND ZINC	MHB		A and B				Y	Y															
FLUORSPAR	MHB		A and B																				
FLY ASH, DRY			C																				
FLY ASH, WET			A																				
FOAM GLASS GRAVEL			C																				
GLASS CULLET			C																				
GRAIN SCREENING PELLETS			C																				
GRANULAR FERROUS SULPHATE			C																				
GRANULATED NICKEL MATTE (LESS THAN 2% MOISTURE CONTENT)	MHB		B				Y	Y															
GRANULATED SLAG			C																				
GRANULATED TYRE RUBBER			C																				Yes ²
GYPSUM			C																				
GYPSUM GRANULATED			C																				
ILMENITE CLAY			A																				
ILMENITE (ROCK)			C																				
ILMENITE SAND			A																				
ILMENITE (UPGRADED)			A																				
IRON AND STEEL SLAG AND ITS MIXTURE			A																				
IRON ORE			C																				
IRON ORE FINES			A																				

a	b	c	d	e	f	g	h	i	j	k	l	m	n	SOLAS Reg.II-2/54.2 or 19.3							w		
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical	Dual purpose nozzles	4 jets of water	Heating arrangement	Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	FFEA (SOLAS Reg.II-2/10.7.1.3)	
IRON ORE PELLETS			C																				
IRON OXIDE, SPENT or IRON SPONGE, SPENT	4.2	1376	B	A		Nm	Y	Y		IIAT2	Y			X	X				X	X	X	Yes	
IRON OXIDE TECHNICAL			A																				
IRON SINTER			C																				
IRON SMELTING BY-PRODUCTS			C																				
IRONSTONE			C																				
LABRADORITE			C																				
LEAD NITRATE	5.1	1469	B			N	Y	Y			Y	Y		X	X				X	X		(Yes)	
LEAD ORE			C																				
LIME (UNSLAKED)	MHB		B																				
LIMESTONE			C																				
LINTED COTTON SEED	MHB		B				Y															Yes	
MAGNESIA (DEADBURNED)			C																				
MAGNESIA (UNSLAKED)	MHB		B																				
MAGNESITE, natural			C																				
MAGNESIUM NITRATE	5.1	1474	B				Y	Y			Y	Y		X	X				X	X		(Yes)	
MAGNESIUM SULPHATE FERTILIZERS			C																				
MANGANESE COMPONENT FERROALLOY SLAG			C																				
MANGANESE ORE			C																				
MANGANESE ORE FINES			A																				
MARBLE CHIPS			C																				
MATTE CONTAINING COPPER AND LEAD	MHB		B				Y	Y															

a	b	c	d	e	f	g	h	i	j	k	l	m	n	SOLAS Reg.II-2/54.2 or 19.3							w	
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical	Dual purpose nozzles	4 jets of water	Heating arrangement	Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	FFEA (SOLAS Reg.II-2/10.7.1.3)
METAL SULPHIDE CONCENTRATES	MHB		A and B				Y															Yes ⁹
METAL SULPHIDE CONCENTRATES, CORROSIVE	8	1759	A and B				Y	Y											Y	Y		Yes ⁹
METAL SULPHIDE CONCENTRATES, SELF-HEATING	4.2	3190	A and B	A			Y	Y						X	X				X	X	X	Yes
MINERAL CONCENTRATES			A																			
MONOAMMONIUM PHOSPHATE (M.A.P.)			C																			
MONOAMMONIUM PHOSPHATE (M.A.P.), MINERAL ENRICHED COATING	MHB		B				Y	Y														
MONOCALCIUMPHOSPHATE (MCP)	MHB		A and B				Y	Y														
NICKEL ORE			A																			
OLIVINE GRANULAR AND GRAVEL AGGREGATE PRODUCTS			C																			
OLIVINE SAND			A																			
PEANUTS (in shell)			C																			
PEAT MOSS	MHB		A and B			Nm																
PEBBLES (sea)			C																			
PELLETS (concentrates)			C																			
PERLITE ROCK			C																			
PETROLEUM COKE (calcined or uncalcined)	MHB		B				Y	Y			Y											
PHOSPHATE (defluorinated)			C																			
PHOSPHATE ROCK (calcined)			C																			
PHOSPHATE ROCK (uncalcined)			C																			
PIG IRON			C																			
PITCH PRILL	MHB		B			Nm	Y	Y			Y											
POTASH			C																			

a	b	c	d	e	f	g	h	i	j	k	l	m	n	SOLAS Reg.II-2/54.2 or 19.3							w		
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical	Dual purpose nozzles	4 jets of water	Heating arrangement	Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	FFEA (SOLAS Reg.II-2/10.7.1.3)	
POTASSIUM CHLORIDE			C																				
POTASSIUM NITRATE	5.1	1486	B				Y	Y			Y	Y		X	X				X	X			(Yes)
POTASSIUM SULPHATE			C																				
PUMICE			C																				
PYRITE (containing copper and iron)			C																				
PYRITES, CALCINED (Calcined Pyrites)	MHB		A and B																				
PYROPHYLLITE			C																				
QUARTZ			C																				
QUARTZITE			C																				
RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I)	7	2912	B				Y	Y															
RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I)	7	2913	B				Y	Y															
RASORITE (ANHYDROUS)			C																				
RUTILE SAND			C																				
SALT			C																				
SALT CAKE			C																				
SALT ROCK			C																				
SAND			C																				
SAND, HEAVY MINERAL			A																				
SAND, MINERAL CONCENTRATE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I)	7	2912	A and B				Y	Y															
SAWDUST	MHB		B			Nm																	Yes
SYNTHETIC SILICON DIOXIDE			A																				

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical	Dual purpose nozzles	4 jets of water	Heating arrangement	SOLAS Reg.II-2/54.2 or 19.3								FFEA (SOLAS Reg.II-2/10.7.1.3)	
														Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation		
SCALE GENERATED FROM THE IRON AND STEEL MAKING PROCESS			A																				
SCRAP METAL			C			Nm																	
SEED CAKE (a)	4.2	1386	B	A			Y							X	X				X	X	X	Yes	
SEED CAKE (b)	4.2	1386	B	A ⁵	Y	Nm, Sp	Y			IIAT3 ⁵				X	X	X ⁵	X ⁵	X ⁵	X	X	X	Yes	
SEED CAKE	4.2	2217	B	A	Y	Nm, Sp	Y			IIAT3				X	X	X	X	X	X	X	X	Yes	
SEED CAKES AND OTHER RESIDUES OF PROCESSED OILY VEGETABLES	MHB		B			Nm, Sp	Y			IIAT3												Yes	
SEED CAKES AND OTHER RESIDUES OF PROCESSED OILY VEGETABLES			C																				
SEED CAKE (non-hazardous)			C																				
SILICOMANGANESE (carbo-thermic)			C																				
SILICOMANGANESE (low carbon)	MHB		B		Y	M, Sa	Y			IICT1													
SILICON SLAG			C																				
SODA ASH			C																				
SODIUM NITRATE	5.1	1498	B				Y	Y			Y	Y		X	X				X	X		(Yes)	
SODIUM NITRATE AND POTASSIUM NITRATE MIXTURE	5.1	1499	B				Y	Y			Y	Y		X	X				X	X		(Yes)	
SOLIDIFIED FUELS RECYCLED FROM PAPER AND PLASTICS	MHB		B					Y														Yes	
SPODUMENE (UPGRADED)			A																				
STAINLESS STEEL GRINDING DUST			C																				
STONE CHIPPINGS			C																				
SUGAR			C																				
SUGARCANE BIOMASS PELLETS	MHB		B				Y															Yes	
SULPHATE OF POTASH AND MAGNESIUM			C																				

a	b	c	d	e	f	g	h	i	j	k	l	m	n	SOLAS Reg.II-2/54.2 or 19.3							w		
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical	Dual purpose nozzles	4 jets of water	Heating arrangement	Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	FFEA (SOLAS Reg.II-2/10.7.1.3)	
SULPHUR (formed, solid)			C			Nm																	
SULPHUR (crushed lump and coarse grained) ⁶	4.1	1350	B	A	Y	Nm, Sp	Y			IIAT4				X	X	X		X ⁸	X	X	X		
SUPERPHOSPHATE			C																				
SUPERPHOSPHATE (triple, granular)			C																				
SYNTHETIC CALCIUM FLUORIDE			A																				
SYNTHETIC SILICON DIOXIDE			A																				
TACONITE PELLETS			C																				
TALC			C																				
TANKAGE	MHB		B				Y																Yes
TAPIOCA			C																				
TITANOMAGNETITE SAND			A																				
UREA			C																				
VANADIUM ORE	MHB		B				Y																
VERMICULITE			C																				
WHITE QUARTZ			C																				
WOODCHIPS	MHB		B				Y																Yes ⁷
WOOD PELLETS CONTAINING ADDITIVES AND/OR BINDERS	MHB		B				Y																Yes
WOOD PELLETS NOT CONTAINING ANY ADDITIVES AND/OR BINDERS	MHB		B				Y																
WOOD PRODUCTS - GENERAL	MHB		B			Nm	Y																
WOOD TORREFIED	MHB		B				Y																Yes
ZINC ASHES	4.3	1435	B	A	Y	ML,Sa	Y	Y		IICT2						X	X	X	X	X	X		
ZINC OXIDE ENRICHED FLUE DUST	MHB		A and B				Y	Y															

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w		
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical	Dual purpose nozzles	4 jets of water	Heating arrangement	SOLAS Reg.II-2/54.2 or 19.3								FFEA (SOLAS Reg.II-2/10.7.1.3)		
														Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation			
ZINC SLAG			A																					
ZIRCON KYANITE CONCENTRATE			A																					
ZIRCON SAND			C																					

❖ Newly added Cargoes and requirements on construction/equipment are written by RED Color.

Description of Appendix 1:

A) The contents of each column in this table are as follows.

CARGOES (Column “a”)

Bulk Cargo Shipping Names are expressed in capital letters and identifies a bulk cargo during transport by sea.

IMO class (Column “b”)

Group B cargoes are categorized into the following classes:

- ✓ Class 4.1: Flammable solids
- ✓ Class 4.2: Substances liable to spontaneous combustion
- ✓ Class 4.3: Substances which, in contact with water, emit flammable gases
- ✓ Class 5.1: Oxidizing substances (agents)
- ✓ Class 7: Radioactive materials
- ✓ Class 8: Corrosive solid substances
- ✓ Class 9: Miscellaneous dangerous substances and articles
- ✓ MHB: Materials which may possess chemical hazards when transported in bulk other than materials classified as dangerous goods in the IMDG Code.

UN No. (Column “c”)

This is a 4-digit number assigned to a particular dangerous substance included in the dangerous substance list (approximately 3,000 items) within the United Nations Recommendations on the Transport of Dangerous Goods issued by the United Nations Committee of Experts on the Transport of Dangerous Goods.

Group (Column “d”)

- ✓ **A:** Group A consists of cargoes which may liquefy if shipped at moisture content in excess of their transportable moisture limit.
- ✓ **B:** Group B consists of cargoes which possess a chemical hazard which could give rise to a dangerous situation on a ship.
- ✓ **C:** Group C consists of cargoes which are neither liable to liquefy (Group A) nor to possess chemical hazards (Group B).

Stowage (Column “e”)

- ✓ **A:** Bulkheads to the engine room are to be insulated to A-60 standard or to be isolated by the spaces (e.g. FOT, DOT and void space).
- ✓ **F:** Boundaries of components are to be resistant to fire and passage of water.
- ✓ **G:** Bulkheads to the engine room are to be of gastight.

NO SMOKING sign (Column “f”)

- ✓ **Y:** “NO SMOKING” signs are to be posted on decks and in areas adjacent to cargo compartments.

Ventilation (column “g”)

- ✓ **N:** Natural ventilation system is to be provided for cargo holds.
- ✓ **Nm:** Natural or mechanical ventilation system is to be provided for cargo holds.

- ✓ **M**: Mechanical ventilation system is to be provided for cargo holds.
- ✓ **ML**: At least two mechanical ventilation fans are to be provided for cargo holds. The total ventilation is to be at least six air changes per hour. Ventilation openings are to comply with the requirements of the Load Line Convention as amended for openings not fitted with means of closure. The height of coaming is to be equal to or more than regulated height (Position 1: 4.5 m, Position 2: 2.3 m).
- ✓ **Sa**: Ventilation fans are to be safe for use in a flammable atmosphere.
- ✓ **Sp**: Spark-arresting screens (wire mesh guards with max. 13mm X 13mm) are to be fitted to ventilation openings.

SCBA (Column “h”)

- ✓ **Y**: Two self-contained breathing apparatuses with 200% spare cylinders are to be additionally provided.

Protective clothing resistant to chemical attack (Column “i”)

- ✓ **Y**: Four sets of protective clothing which consists of a pair of gloves, boots, a protective clothing and helmet with goggles are to be additionally provided.

Bilge line (Column “j”)

- ✓ **F**: In case where bilge lines are led to machinery space, bilge line is to be isolated either by fitting a blank flange or by a closed lockable valve.
- ✓ **N**: A notice is to be placed adjacent to the valve warning against opening without the master’s permission.

Electrical equipment (Column “k”)

Not suitable explosion protected type electrical equipment are to be disconnected (by removal of links in the system, other than fuses) from the power source at a point external to the space.

- ✓ **IIAT2**: Electrical equipment having an explosion protection grade of IIAT2 or upwards are considered as suitable explosion protected type electrical equipment.
- ✓ **IIAT3**: Electrical equipment having an explosion protection grade of IIAT3 or upwards are considered as suitable explosion protected type electrical equipment.
- ✓ **IIAT4**: Electrical equipment having an explosion protection grade of IIAT4 or upwards are considered as suitable explosion protected type electrical equipment.
- ✓ **IICT1**: Electrical equipment having an explosion protection grade of IICT1 or upwards are considered as suitable explosion protected type electrical equipment.
- ✓ **IICT2**: Electrical equipment having an explosion protection grade of IICT2 or upwards are considered as suitable explosion protected type electrical equipment.
- ✓ **IS**: Intrinsically safe type electrical equipment are considered as suitable explosion protected type electrical equipment.

Dual purpose nozzles (Column “l”)

- ✓ **Y**: Nozzles provided with fire hoses are to be of dual-purpose type (i.e., spray/jet type).

4 jets of water (Column “m”)

- ✓ **Y**: The quantity of water delivered is to be capable of supplying four nozzles at pressure as specified in SOLAS regulation and being trained on any part of the cargo space when empty.

Heating Arrangement (Column “n”)

- ✓ **N1:** The means to disconnect heating arrangements for the tank(s) are to be provided.
- ✓ **N2:** The means to monitor and control the temperature of boundary between the tank(s) and cargo space loading the cargo so that it does not exceed 50°C are to be provided.

Requirements of SOLAS Reg.II-2/54.2 (Reg.II-2/19.3 on or after 2000 amendments)

(Column “o” ~”v”)

- ✓ **X:** Applicable.

FFEA (SOLAS Reg.II-2/10.7.1.3) (Column “w”)

- ✓ **Yes:** Fixed CO2 fire extinguishing system for cargo holds are required by SOLAS Reg.II-2/10.7.1.3.
- ✓ **(Yes):** Fixed gas fire-extinguishing system is ineffective and for which a fixed fire-extinguishing system giving equivalent protection shall be available. According to the Unified Interpretation of IMO, water supplies defined in SOLAS Reg.II-2/19.3.1.2 are considered as the alternative of a fixed gas fire-extinguishing system in cargo spaces.

B) General Notes:

- ✓ For the detailed requirements of the IMSBC Code, the relevant part of the Code should be referred to.
- ✓ The application of the requirements of SOLAS Reg.II-2/54.2 or 19.3 is shown just for ready reference.
For the detailed requirements, the relevant part of the SOLAS should be referred to.
- ✓ Blank columns mean “Not applicable”.

C) Notes:

1. CASTER MEAL, CASTER POMACE and CASTER FLAKE shall not be carried in bulk.
2. For the planned voyage not exceeding 5 days from the commencement of loading to the completion of discharge, the ship may be exempted from the requirements of FFEA.
3. Consideration shall be given to providing the ship with the means to top up the cargo spaces with additional supplies of inert gas taking into account the duration of the voyage. The ship’s fixed CO2 fire extinguishing system shall not be used for this purpose.
4. (blank)
5. Only applicable to Seedcake containing solvent extractions only.
6. Fine grained Sulphur (flowers of Sulphur) shall not be transported in bulk.
7. With moisture content of 15% or more, the ship may be exempted from the requirements of FFEA.
8. Only suitable wire mesh guards are required.
9. Except Metal Supplied Concentrates considered as presenting a low fire-risk.



Appendix 2: IMSBC Code - Initial Checklist
(for cargoes other than COAL and BROWN COAL BRIQUETTES)

Code: **TI-20-17**

Date: **14.12.2020**

Appendix 2: IMSBC Code - Initial Checklist
(for cargoes other than COAL and BROWN COAL BRIQUETTES)

Columns	Requirements	Results
e	Stowage: <input type="checkbox"/> Bulkheads to the engine room are to be insulated to A-60 standard or to be isolated by the spaces (e.g. FOT, DOT, and void space). <input type="checkbox"/> Boundaries of components are to be resistant to fire and passage of water. <input type="checkbox"/> Bulkheads to the engine room are to be of gastight.	<input type="checkbox"/>
f	NO SMOKING sign: <input type="checkbox"/> "NO SMOKING" signs are to be posted on decks and in areas adjacent to cargo compartment.	<input type="checkbox"/>
g	Ventilation: <input type="checkbox"/> Natural ventilation systems are to be provided for cargo holds. <input type="checkbox"/> Natural or mechanical ventilation systems are to be provided for cargo holds. Mechanical ventilation systems are to be provided for cargo holds. <input type="checkbox"/> At least two mechanical ventilation fans are to be provided for cargo holds. The total ventilations are to be at least six air changes per hour. Ventilation openings are to comply with the requirements of the Load Line Convention as amended for openings not fitted with means of closure. The height of coaming is to be equal to or more than regulated height (Position 1: 4.5 m, Position 2: 2.3 m). <input type="checkbox"/> Ventilation fans are to be safe for use in a flammable atmosphere. <input type="checkbox"/> Spark-arresting screens (wire mesh guards with max. 13mm×13mm) are to be fitted to ventilation openings.	<input type="checkbox"/>
h	SCBA: <input type="checkbox"/> Two self-contained breathing apparatuses with 200% spare cylinders are to be additionally provided.	<input type="checkbox"/>
i	Protective clothing resistant to chemical attack: <input type="checkbox"/> Four sets of protective clothing which consists of boots, gloves, coverall and headgear are to be additionally provided.	<input type="checkbox"/>
j	Bilge line: <input type="checkbox"/> In case where bilge lines are led to machinery space, bilge lines are to be isolated either by fitting a blank flange or by a closed lockable valve. <input type="checkbox"/> A notice is to be placed adjacent to the valve warning against opening without the master's permission.	<input type="checkbox"/>
k	Electrical equipment: <input type="checkbox"/> Electrical equipment fitted in the cargo holds, including motors of mechanical ventilation systems, are to be of safe type having an explosion protection grade/type stated below or upwards. Not suitable explosion protected type electrical equipment are to be capable of being positively isolated from outside of the spaces. <input type="checkbox"/> IIAT2 <input type="checkbox"/> IIAT3 <input type="checkbox"/> IIAT4 <input type="checkbox"/> IICT1 <input type="checkbox"/> IICT2 <input type="checkbox"/> IICT3 <input type="checkbox"/> IICT4 <input type="checkbox"/> Intrinsically safe type	<input type="checkbox"/>
l	Dual purpose nozzles: <input type="checkbox"/> Nozzles provided with fire hoses are to be of dual-purpose type (i.e., spray/jet type).	<input type="checkbox"/>
m	4 jets of water: <input type="checkbox"/> The quantity of water delivered is to be capable of supplying four nozzles at pressure as specified in SOLAS regulation and being trained on any part of the cargo space when empty.	<input type="checkbox"/>
n	Heating arrangement: <input type="checkbox"/> The means to disconnect heating arrangement for the tank(s) are to be provided (spectacle flange). <input type="checkbox"/> The means to monitor and control the temperature so that it does not exceed 50°C are to be provided.	<input type="checkbox"/>
w	FFEA: <input type="checkbox"/> Fixed CO2 fire extinguishing system is to be provided for cargo holds.	<input type="checkbox"/>

Notes:

1. The requirements checked are applied to the ship.
2. The results of confirmation survey on board have been shown in the right columns:
 - ✓ For the requirements complied with, the columns should be checked.
 - ✓ For the requirements not applied, "N/A" should be entered in the columns.



**Appendix 3: MSBC Code - Initial Checklist
(for COAL and BROWN COAL BRIQUETTES)**

Code: **TI-20-17**

Date: **14.12.2020**

Iranian Classification Society

**Appendix 3: MSBC Code - Initial Checklist
(for COAL and BROWN COAL BRIQUETTES)**

No.	Requirements	Results
1	Boundaries of cargo spaces are to be resistant to fire and liquids.	<input type="checkbox"/>
2	Electrical equipment fitted in the cargo holds are to be of safe type having an explosion protection grade of IIAT4 or upwards. Not suitable explosion protected type electrical equipment are to be capable of being positively isolated from outside of the spaces and have the enclosure having a protection degree of IP55 or upwards, and caution plates to ensure isolation of electrical equipment are to be provided.	<input type="checkbox"/>
3	Suitable means for measuring following gases, etc. in cargo spaces without entry into such spaces are to be provided. Methane Oxygen Carbon monoxide pH value Temperature(0 - 100°C)	<input type="checkbox"/>
4*	Two sets of self-contained breathing apparatus are to be provided. (Note: The apparatus required by SOLAS Reg.II-2/17(00E) or Reg.II-2/10(00N) may be used for this purpose)	<input type="checkbox"/>
5	"No Smoking" signs are to be posted in conspicuous places.	<input type="checkbox"/>
6*	Natural ventilation system is to be provided for cargo spaces and air holes should be provided at the upper part of web plates of longitudinal and transverse girders fitted to deck plates with appropriate spacing. Note: Air holes should not be located at any part that may be subject to stress concentration.	<input type="checkbox"/>
7	Natural or mechanical ventilation systems are to be provided for adjacent enclosed working spaces, such as store rooms, carpenter's shops, passage ways and tunnels. In the case of mechanical ventilation, only the equipment which is safe type for use in an explosive atmosphere can be used in cargo area.	<input type="checkbox"/>
8	Two sampling holes per hold, one on the port side and one on the starboard side of the hatch cover or upper parts of hatch coamings are to be provided with threaded stub and sealing cap.	<input type="checkbox"/>

Notes:

1. The items No.4 & 6 which marked with (*) are not applicable to brown coal (lignite) briquettes.
2. The results of confirmation survey on board have been shown in the right columns:
 - ✓ For the requirements complied with, the columns should be checked.
 - ✓ For the requirements not applied, "N/A" should be entered in the columns.



Appendix 4: Documents/information to be submitted

Code: TI-20-17

Date: 14.12.2020

Iranian Classification Society

Appendix 4: Documents/information to be submitted

Required items		Documents/information to be submitted	
(1)	(2)	The meanings of "H" and "L" are specified under this table.	
(1) Column of Table appendix 1			
(2) Regulation of SOLAS II-2/54 (II-2/19)			
e	2.8 (3.8) "A-60" class insulation of bulkheads between the cargo space and engine room	H	Drawings of fire protection construction Type and manufacture of the material
f	-- "NO SMOKING" signs	L	Number and locations of the signs
g	-- Natural ventilation.	H	Drawings of the system
	2.4.3 (3.4.3) Natural or mechanical ventilation.		
	-- Mechanical ventilation	H	Drawings of the system Calculations of the air changes
	2.4.1 (3.4.1) Mechanical ventilation (total ventilation at least six air changes per hour)		
	2.4.2 (3.4.2) Non-sparking fans		
	Spark-arresting screens (wire mesh guard)	L	Specifications
h	2.6.2 (3.6.2) Self-contained breathing apparatus	L	Type, manufacturer and specifications
i	2.6.1 (3.6.1) Protective clothing resistant to chemicals		
j	-- Stop valves and blank flanges on the bilge lines on machinery space side	H	Drawing of bilge lines
k	2.2 (3.2) Electrical equipment to be of safe type.	H	Arrangement and wiring diagram of electrical equipment fitted in the space including grade of each equipment.
l	- Jet/spray dual purpose type nozzle	L	Type, manufacturer and specifications
m	2.1.2 (3.1.2) Capacity of fire pumps to supply four nozzles	H	Fire main piping diagram with arrangement of hydrant and pump capacity.
n	- Heating arrangement	H	Drawing of heating arrangement. Drawing of the system for measuring and monitoring temperature.
w	- Fixed CO2 fire extinguishing system for cargo hold (FFEA)	H	Drawing of the system

- ✓ **H:** To be submitted to ICS head office for examination by the Head office.
- ✓ **L:** To be submitted to attending surveyor for their checking.



Appendix 5: Documents/information to be submitted for COAL/BROWN COAL BRIQUETTES

Code: **TI-20-17**

Date: **14.12.2020**

Iranian Classification Society

Appendix 5: Documents/information to be submitted for COAL/BROWN COAL BRIQUETTES

Requirements on Table 2.3	Documents/information to be submitted The meaning of "L" is specified under this table	
Boundaries of cargo spaces should be resistant to fire and liquids.	-	-
Electrical cables and components situated in cargo spaces and adjacent spaces should be free from defects and safe for use in explosive atmosphere or positively isolated.	L	Arrangement and wiring diagram of electrical equipment fitted in the space including grade of each equipment, such as IIAT4.
Appropriate instruments for measuring followings into cargo spaces without entry into such spaces should be provided. Methane Oxygen Carbon monoxide pH value Temperature(0 - 100°C)	L	Type, manufacturer and specifications
Two sets of self-contained breathing apparatus to be provided.	L	Type, manufacturer and specifications
"No Smoking" sign and "No naked flames" sign should be posted in conspicuous places.	L	Number and locations of the signs
Natural surface ventilation should be provided for cargo spaces.	L	Drawings of the ventilation systems Arrangement of air holes
Natural or mechanical ventilation should be provided for enclosed working spaces, such as store rooms, carpenter's shops, passage ways and tunnels. Mechanical ventilation, if used, should be of safe type for use in explosive atmosphere.	L	Drawings of the system
Two sampling holes per hold, one on each side of the hatch cover should be provided with threaded stub and sealing cap.	L	Drawings of the system

✓ **L**: To be submitted to attending surveyor for their checking.